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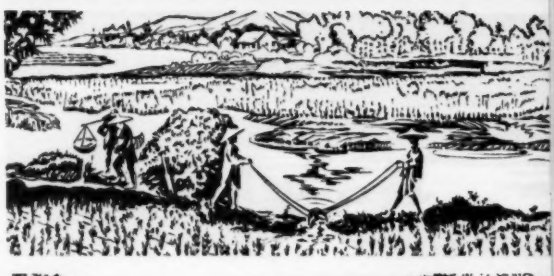

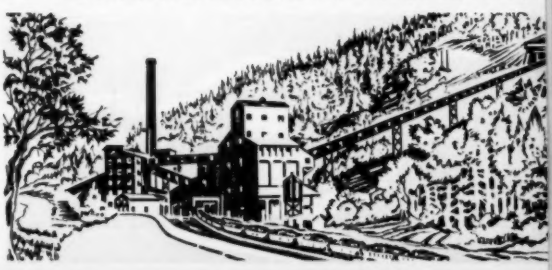

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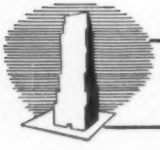

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VOLUME LVII NOVEMBER 1958 NUMBER 8

NORTH AMERICA IN THE CHANGING WORLD

J. WREFORD WATSON
University of Edinburgh

In a changing world few continents earn more jealousy yet excite less envy than North America. It earns the jealousy of all who fail to adapt themselves to change as rapidly or successfully. The one great advantage of America is that it meets change with change. It has the most dynamic and productive way of life on earth. America's today is the world's tomorrow. And yet it invites little envy; increasing power compels it to carry increasing responsibility. Heading means leading; to acquire assets is to accept liabilities.

This is nothing new; it has long been the American dilemma, the freedom to change has had to be matched by the power to change. To change, there must be freedom to change; freedom is fundamental. America cannot afford to be ham-strung by regulation, formulae, or tradition. As Oscar Wilde once said, American tradition is in its youth; in being curious, adventurous, impatient, insurgent, visionary and bold. America was conceived in protest and born in revolt. This has coloured its whole way of thinking. It puts liberty first—preferably within the law, but if necessary without. To be free to change is its cardinal faith, its *raison d'être.*

But to be free to change involves the power to change; power is, therefore, paramount. In America, freedom and power are indissolubly linked. I say, in America, because all freedom does not necessitate power. Far from it. There is a freedom from change, a freedom from struggle, a freedom from responsibility which has tempted many a man to retreat from power. There is a freedom of escape that has drawn the weaker, or the less adaptive, people of the world away from the main arena of human affairs to the mountains, the deserts, or the jungles. Such people are free because they have willingly limited themselves, or rather because they have accepted their limitations.

In his book, *The Children of the Jungle,* Per Høst records an

interesting conversation with a member of a primitive tribe in Central America. On his last evening with the Cuna folk he talked to the chieftain, referring, amonst other things, to their "simple mode of life and their primitive methods of agriculture. The Cunas till their land much as they did a thousand years ago; it is as though time had stood still." Per Høst talked "something about great possibilities—that the Cunas might be rich if they got themselves tools and machines and rationalized their system." To which the chief replied, in a way that was "a typical expression of the Cunas' attitude to life: 'It is best for my people not to be rich. See how it is with the nations that are rich—they are constantly at war to take away each other's riches. We do not want to go to war and we are content to live as our ancestors lived before us.' "[1]

Obviously the Cuna have achieved a certain freedom thru this attitude; they are free from effort, from competition, from contention, from aggression. But this is not American freedom. This is not the freedom of Patrick Henry who cried, "I know not what course others may take; but as for me, give me liberty or give me death." Had men like Patrick Henry been content to live as their ancestors before them, had they not been prepared to go to war, there never would have been an America. American freedom is the freedom to change course, the freedom to strive, the freedom to enrich itself, the freedom to expand, the freedom to succeed. It is the freedom of the open road, of "pathless and wild seas." Its call, as Walt Whitman said, is "the call of battle. It nourishes active rebellion."

Types of Freedom

I think it would be as well to consider this question of freedom a little further. It obviously means different things to different people. It has one meaning for North America, another for Britain, and yet another for Russia. Until we know these differences we cannot appreciate what each of these nations is after in the changing affairs of the world. American freedom is, I would say, as near to absolute freedom as we have; it is the freedom to be different, even at the cost of death. It is the freedom to change, regardless of cost. If Americans were not free, they would not be Americans. Their freedom is their defining character. It is what called them out, and still sets them off, from the rest of the world.

[1] P. Host, *Children of the Jungle*, Pan Books, p. 118.

British freedom is something else; it is both something less and something more than the American. It is something less in that it is not so demanding, uncompromising and rash. It is essentially a conditioned freedom. But this at once makes it something more, in that it is realistic, understanding and wise. In one of his famous speeches Edmund Burke, than whom no one was more sympathetic to America, put the British position by saying, "The only liberty I mean is the liberty connected with order; that not only exists along with order and virtue, *but which cannot exist at all without them.*" This is because in British thought the liberty of the individual is conditional upon, as Spenser remarked, "the like liberty of all." It cannot take liberties with others or else it will cease to ensure the individual's own liberty. As John Stuart Mill wrote, "The liberty of the individual must be thus far limited; he must not make himself a nuisance to other people." Another British thinker put it on a more positive plan. "The love of liberty," claims Hazlitt, "is the love of others."

The Russian sense of freedom, it seems to me, exists in going still further along this line. The Russian sees his greatest possibility of freedom not in exerting individual liberty, but in accepting his freedom from others. He finds his freedom, not in independence, but in interdependence. America's war of independence *was* a war of independence. Individuals took it up because they believed with all their hearts that America's freedom was the freedom of the individual, making each individual more free to pursue and press for and achieve his own desires. The Russian revolution on the other hand was revolt against that individualism which, existing mainly among a few, had impeded, if not imperilled, the well-being of the mass. It was a revolt towards a mass achievement, thru mutual aid, that might eventually give the individual a taste of success. Oddly enough it was not one of the proletariat, it was Prince Kropotkin who put this best. He believed that it was mutual aid and not the survival of the fittest which was of "greatest importance for the maintenance of life, the preservation of each species, and its further evolution."[2] According to this principle the individual limits his freedom to go after his own ends and make sure of his own survival, so that he may have a greater chance of survival in the freedom of the group to achieve *its* ends. In other words, Russian freedom is freedom thru limitation rather than thru assertion. It be-

[2] P. Kropotkin, *Mutual Aid*, Penguin Books, p. 13.

lieves that, as individuals, we cannot do what we please; freedom lies in being pleased with what can be done with us. The mass is our salvation. It defends us from ourselves, and therefore gives us each more scope. As Professor Macmurray says, tho in quite another context, "The free man is the man whose means are adequate to his ends. We can increase our freedom by limiting our desires."[3] The Russians, by limiting individual desires, and finding in the mass the means adequate to their ends, have achieved their kind of freedom, albeit a very different freedom from that of the West.

These distinct notions of liberty have inspired America, Britain and Russia to follow different courses in world affairs. And it is this fact, as much as anything else, which shapes the present geography of man. It is not the inequality of the earth, great tho that may be, which now controls the distribution of prosperity, of standards of living, and of health, so much as the inequality of man, grown greater with the years. The unequal earth has been made more unequal by the very different cultural, political and economic systems that man has adopted. This is why there is such an urgent need at once to appraise the inequalities due to geography and strive to create a geography of equality. This is, I am convinced, one of the major tasks for our age. It is one in which we geographers can make a very real contribution. But we shall only begin to do so when we realise the growing importance of culture, economy and polity in the geography of world problems.

But let us turn back to America. Its peculiar idea of freedom as the right to "get off with" what it can "pull off," clearly depends, as it has depended, on its power to do what it would like to do. It follows then, that its freedom should increase with its power, other things being equal. Historically the love of freedom, coupled with the intention to be free, led individual Americans to settle in the Red River territory, in the Aroostook valley, and in the Columbia basin even altho these areas were claimed by Canada, or rather by Britain thru Canada. Similar drifts of restless, pioneer, individualistic, law-contesting Americans into Texas, New Mexico and California cut across the rights, and thus the liberties, of Mexico. There was nothing here of that respect for the like liberty of others, characteristic of Britain. There was nothing of that dependence on interdependence found in modern Russia. Handfuls of individuals set out to get what they pleased, *if they could get it;* and Canada

[3] J. Macmurray, *Conditions of Freedom*, Ryerson, 1949, p. 6.

and Mexico went to the wall. The test was power. If the Americans *could* settle the Red River, if they *could* settle the Columbia basin, they felt themselves free to do so. It was almost as simple as that. And consequently America rolled back the Canadian and Mexican frontiers and built a country from coast to coast. It acquired and ruled the heartland of the continent.

HEARTLAND OF NORTH AMERICA

It is strange that so little attention has been paid to *this* heartland. European geographers, influenced of course by their geography, have been fascinated by the other heartland, that in the pivotal area of the Old World, namely the Middle East, Eastern Europe and Southern Russia. The words of Mackinder with reference to that heartland are known even to the man in the street.

But why should we not apply Mackinder's words to the American heartland?

He who rules the American heartland rules N. America.

He who rules N. America rules the Pacific and the Atlantic.

He who rules the Pacific and the Atlantic rules the World. Is there not some justification for this? Let us put it in the freedom-power frame of the American mentality which we have postulated. The freedom of the original Thirteen Colonies could not have been ensured, had not the Americans been free to take over the American heartland, that is, the Great Lakes—Ohio—Mississippi—Missouri plains. Once they had consolidated their hold there they were free from any fatal threats from Britain or Spain out of Canada and Mexico. The fact that their freedom had been vindicated by their power gave them that sense of manifest destiny that carried them from coast to coast (and that has since carried them across the Atlantic and Pacific and into half the Arctic. But more of this later).

It became apparent in the First World War, and even more so in the second, that the freedom of the American heartland could only be ensured by a free Canada and Mexico. The possible, tho distant, threat of the fall of British North America to Germany, the greater possibility of a German occupation of Mexico—such a scare came near enough—led America to seek a position of privilege with its neighbours. These neighbours, for their part, knew that their defense ultimately depended, should Britain and France fall, on an America whose strength lay in the New World "heartland."

Thus, in due course, the Ogdensburg agreement brought Canada and America together in mutual defense, while subsequently the Treaty of Petropolis tied Mexico and the other Latin American states into the American defense system. It is true this was not done under compulsion from America. But the compulsion of events, linked with America's possession of the heartland, forced Canada and Mexico to acknowledge American leadership.

A new threat arose after the Second World War in the form of Russian, instead of German, aggression. Russia was the only power substantially to increase its territory as a result of the war, and had entered a new expansionist era. The possibility that it might launch direct attacks upon the American heartland by long range bombers over the Arctic and the defenseless tracts of northern Canada spurred America and Canada into still closer defense agreements. A permanent Joint Defense Board was set up, and the Canadian services began to use American equipment jointly with the American services. The Canadian airforce, in particular, became partly, if not largely, Americanized, while the two nations together built three transcontinental lines of radar posts across southern, central and northern Canada specifically to protect the continental heartland.

Thus it could quite well be claimed that he who ruled the heartland came to rule N. America. Even the most imperially minded Canadians now realized where their help came from!

Pacific and Atlantic Approaches

Before this consolidation of the continent took place, American freedom saw that to ensure the liberty of the continent, and of the way of life which was fast becoming continent-wide, it would have to take over, or protect, the Pacific and Atlantic approaches. The building of the Panama canal meant particularly that the Caribbean approaches had to be secured. Space does not permit the detailed treatment of ways in which America obtained unique privileges in the republics of Panama, Nicaragua and Cuba, amounting in some cases to the right to keep troops there or to intervene should America's vital interests be affected. Suffice it to say that America soon dominated the Caribbean. Her position was strengthened of course by the acquisition of Puerto Rico and of the Virgin Islands.

Meantime there had been a steady consolidation in the northern and eastern Pacific. Unfortunately America entered the first world

war too late to make major conquests there from Germany. The German islands became, in the main, Japanese mandates. Thus, altho Alaska, the Aleutians, and Hawaii gave America a measure of security in the Pacific they did not entirely protect its flank. Japan's surprise attack on Pearl Harbor showed this up, in the Second World War. In that war, the containment of Japan in the Pacific was mainly an American duty. To ensure the freedom of the Pacific coast from Alaska to Panama meant that America had to throw her net wide; British possessions like Fiji and northern New Guinea; the southern Dominions of New Zealand and Australia; French possessions, like New Caledonia, were all brought in as part of the American dragnet which eventually cleared Japan from the Pacific seas. After the defeat of Japan, America enormously increased its sphere of control and influence in the Pacific by the acquisition of Japanese mandated islands, the possession of Okinawa, and the occupation of Japan. Subsequently its protection of Taiwan, and its treaties of friendship with the Philippines, and with Australia and New Zealand gave it the virtual mastery of the Pacific.

And what about the Atlantic? Little gain was made in this area till the Second World War. Little gain was needed till then because Britain really protected the region, and made it very unlikely that any real threat could reach America from Europe or North Africa. Britain's desperate plight at the beginning of the Second World War changed the picture. Spain was sympathetic with Hitler. France had fallen. Vichy rule in North Africa neutralized it, if not offered it to Germany. Denmark and Norway were about to fall, to give Germany bases in the north. If Britain had collapsed, the whole of the east Atlantic could have been used as a springboard for an attack on America. Britain's plight was America's opportunity. For a mess of fifty old destroyers Britain sold certain rights to America in Bermuda, Newfoundland, the Bahamas and Trinidad. In one bound America had become a mid-Atlantic power, as well as a Caribbean one. Futher to ensure the freedom of the Atlantic involved concessions from Iceland and Greenland. With these, America was able to dominate the northern Atlantic, and the approaches to and from the Arctic.

Her hold on the Atlantic was really *consolidated,* however, after the war, when the possibility that Russia might threaten western Europe, led to the rise of NATO, and the treaties of mutual defense

which bound the eastern seaboard of the Atlantic, together with most of the Mediterranean, to the American sphere. Special treaties between America and Portugal and Spain have given America the key to the Mediterranean. Indeed, Professor East remarks that, due to these new alignments, and to the privileges that America has obtained in North Africa, "The United States is quietly writing a new page of history by replacing Britain as the guardian of the western gateway to the Mediterranean."[4] It is astonishing to find an Englishman write this, but that only serves to emphasize the new situation in world geography: America is now pre-eminent from the Mediterranean Sea to the Sea of Japan.

THE NEXT STAGE

What is the next stage? Will it become true that he who dominates the Pacific and the Atlantic will rule the world? America's power is immense. No other nation has ever stretched itself so far or gained such strategic holdings. How will she use these advantages? No question is more important to our times and to the world.

It is difficult to suggest an answer. Has America at last obtained enough power to ensure its freedom? That is the heart of the matter. But before that can be cleared up, a deeper, more universal problem has to be solved. Can power and freedom go hand in hand? We have said, Freedom needs power. At least the American type of freedom, the freedom to live the life one wants, in the lands and seas where that life is based, this freedom needs power. But does power need freedom? The initial power of America, its early success, its expansion across the continent, its rise to nationhood, certainly needed freedom. Unless men had loved freedom as much, they would not have striven for it so; advancing it, they advanced themselves. But does power *necessarily* need freedom? We have seen in our own day that it does not. There may come a time when it rests on the results of freedom rather than freedom itself; on success, on vested interests in success, and on all the symbols, formulas and traditions that success has sanctified. Does power not then become more interested in enjoying fruits than in planting seeds, in security than in growth? Power obsessed with security, with maintaining the status quo, with the thing possessed rather than what it is possessed for, might become the very antithesis of freedom. (It would certainly be the antithesis of that freedom which America

[4] W. G. East, and A. E. Moodie, *The Changing World*, 1956, p. 201.

boasts.) But an obsession with security, stressing acquisition, might very well lead to a sense of insecurity unless all were acquired. In such an event America might persuade itself that to secure its acquisitions and positions, it would need not only to dominate the Atlantic and Pacific, but to rule the world.

However, I am persuaded that most Americans believe in freedom more than in power; power is necessary to them only in so far as it provides freedom. It is a means to an end, and not an end in itself. All their history shows that they have placed freedom first. A powerful America rests on a free America, freedom is their best security. And the challenge of their might is the challenge of their freedom. To share their power, to obtain a standard of living like theirs, to enjoy their prosperity, we Europeans must be prepared to stress their kind of freedom, we must be willing to accept change, and to accept it on behalf of the individual. We must give the individual greater scope. This may not mean, however, such a great modification of our own freedom. For it is to be remembered that a powerful America rests on the free world. American power has drawn that nation out to become dependent, to some extent, on other freedoms and on the other freedom-loving nations. Thus it will become increasingly cognizant of our freedoms; more, it will have to respect them.

I feel that nothing could be of greater significance, since this new situation is teaching America, and teaching us all, to think in world terms, to think in terms of Man himself, not countries, classes, or creeds. This is a great opportunity for America. As it grows into a world power it will qualify its own wants, wishes and will by the desires and hopes of others, or will bring itself and all the countries associated with it, nearer to that world-embracing view in which alone the world's freedom can be secured. If it can do this, if it can create the conditions in which we think of man as a whole, it may be the very agent to create a geography of equality where we can make the most of our earth. Personally, this is how I see the role of North America in the Changing World.

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BERLIN*

ADOLF STONE
Long Beach City College

"Berlin is the most interesting city in Europe." This statement refers to a paradox unequaled any place else in the world. The capital of defeated Germany under the 1945 Potsdam Agreement became a joint trust of the then four allied powers, the U.S.A., France, Great Britain and the U.S.S.R., whereas all other German lands were divided into four occupation zones. Since the Red army took over all German territories east of the Elbe River, Berlin became a political island surrounded on all sides by what the West calls the Soviet Zone and what the East has designated as the German Democratic Republic (Fig. 1).

The events following this partition are well-known. The cooperation between the three Western allies and the U.S.S.R. came to an end in 1948. A Soviet attempt to swallow Berlin by cutting all roads and all communications was met by the historic "airlift," or better "airbridge," as the Germans called it. For eleven months, from June 1948 to May 1949, more than two million Berliners were kept alive by airmissions of peace. When the blockade ended on May 12, 1949, two worlds began to consolidate in a space of only 338.3 square miles, one patterned after American Democracy and the other after Russian Communism. Berlin today is the most interesting city in Europe because it is an outpost of the West in a "Red" sea.

LOCATION

Two factors account for the rise of Berlin, 1) its geographical location and 2) the history of the Hohenzollern dynasty. The city lies about half way between the Elbe and the Oder, the two important waterways which open Central Europe to North Sea and Baltic Sea traffic (Fig. 2).

The original town was at a crossing point of a large west-east glacial depression. Swamps, lakes, and small rivers, such as the Havel and the Spree, still mark the path of the retreating ice and stretch all the way to the 700 mile long Elbe and the 500 mile long Oder. Thus, a combination of central location and of navigation

* The author wishes to express his grateful appreciation for the contribution of much unpublished information by the 1. Free University of Berlin, Institute of Geography, 2. U. S. Mission Berlin-Dahlem.

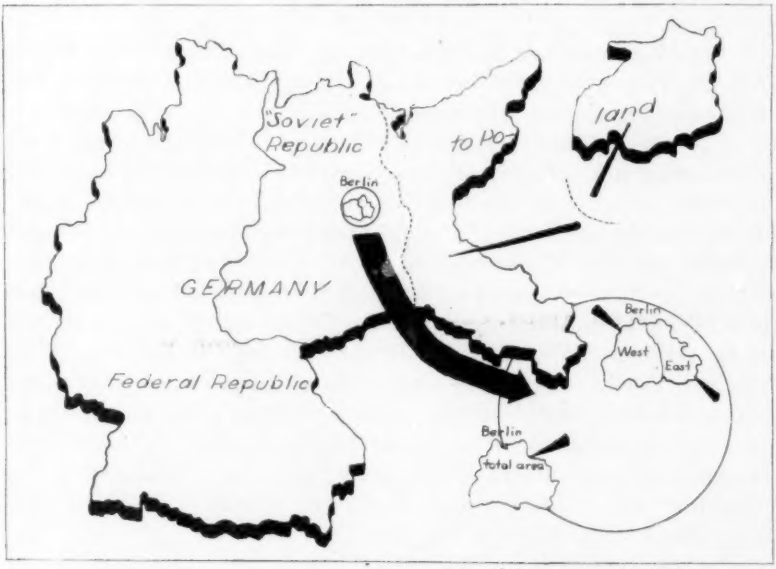

FIG. 1 The German Problem (1937 area in four parts)

facilities to the open sea are natural growth factors in this city of several harbor basins and of famous water sport facilities.

Bodies of water are so frequent, even in the metropolitan area, that a surprising 20 percent of Berlin is still in parks, each spreading around one, or several, waterfilled depressions. Best known are the "Grunewald" (Green Forest) and the "Tiergarten" (Game Garden). The few driftpiles, none exceeding 350 feet, in this flatland of sands and marshes became so prominent that they are reflected in district names, such as Kreuzberg and Schoeneberg (berg meaning mountain).

Climatic charts, too, show that Berlin is a meeting place, namely of continental influences from the East and of maritime influences from the West. There is much irregularity in the length of summer and winter. Temperatures climb as high as 85°F. in July and fall to 15°F. in January. Annual precipitation is around 30 inches with considerable snowfall in winter. Berliners consider their climate the invigorating variety. It might be pointed out that even in the densely populated center rift, air pollution is only slight due to ample winds.

Growth

Berlin was named in 1307 after its feudal lord Albrecht, the *BEAR*. The city's symbol ever since is the Bear displayed on city-seal and flag, also on all products made in this city of the bear.

Growth, thereafter, came step by step. The bridle trail of the Hohenzollern Kurfuerst (Prince elector) to his hunting lodge, for instance, is now the fashionable boulevard "Kurfuerstendamn." What was the property of a princess developed into one of Berlin's largest districts, "Charlottenburg." A Friedrich (Frederic), like in Friedrich Strasse, became king and thereafter turned the place into his royal capital. Finally, Chancellor Bismarck proclaimed his King Wilhelm (William) in 1871 the new German emperor. With this act, Berlin took a seat among the great centers of the world and words from the "Wilhelm-Strasse" were as much listened to as those of Downing Street or Pennsylvania Avenue. Unfortunately, the imperial government of this second Reich paid less heed to city planning than to the building of the two pillars of a unified Germany, the civil service and the army.

To take care of the ever-swelling population, a conglomerate of unsightly apartment houses and streets grew up. Historic homes in the old center gave way to new office and business structures and Berlin's core area became known officially as "the city." The Nazis with their coordination of party and government brought new armies of functionaries and with them more "city" construction. Berlin's population in 1943 had reached 4,489,000 and Hitler's chief of construction and armament, Albert Speer, prepared it for a ten million hub of central Europe's highways, railroads and airlines.

The Pieces

Then came the catastrophe. The unfortunate, but under the circumstances unavoidable, allied air bombardments of 1943-45 were followed by the fury of Hitler's last ditch fight in the streets of Berlin. German officials claim that the Red army, after achieving victory, in the months of uncontested rule from May to July, 1945, continued the destruction and also dismantled 70 percent of the city's industrial installations.

In July, 1945, the already mentioned four-power military government took charge of a city of ruins. The 2,807,000 remaining Berliners, after evacuees and casualties, literally dug out from the rubble. Clearing and salvage teams, among them many women,

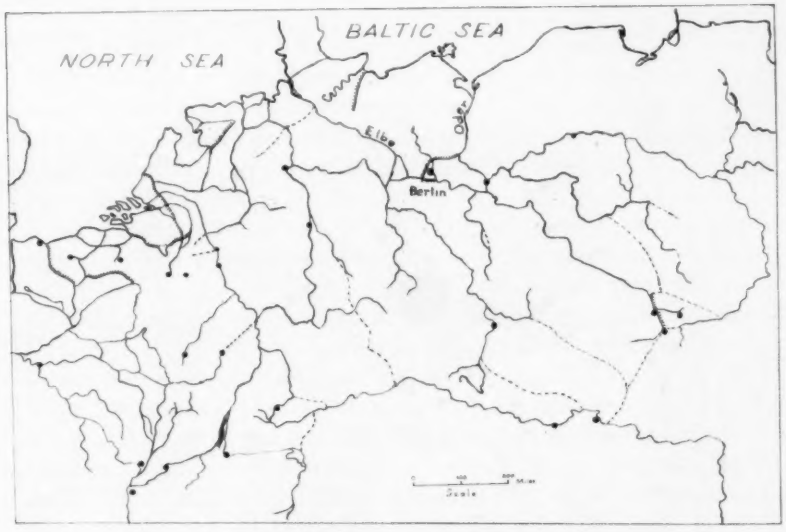

FIG. 2 Central Europe—Navigable Waters

were the first signs of new life and the most needed tools and machines were put together in a manner in which American boys build engines out of junked parts.

With the Allied Kommandantura as the highest echelon, each ally was, and still is, responsible for one sector of the city. Southwestern Berlin, an area of 81 square miles, is under U.S. guardianship. In 1949, the three Western allies began to consolidate their total area of 184.5 square miles into a "Free Berlin," while the 153.8 square miles of Soviet sector under the catching name, "Democratic Berlin," was being integrated into communistic East Germany. West and East now are in such proximity that in some instances a street is policed by communists while the houses facing this street are under Western control with Western policemen walking their beat from basement to basement.

The unfortunate city has more governments than any other place in the world and everything exists in duplicate from public utilities to fire departments, and from mail to street cleaning. No telephone connects East and West Berlin and the only joint operation is the sewage system. Yet, commuting within the total area of Berlin is still possible except for customs and currency control at the sector boundaries.

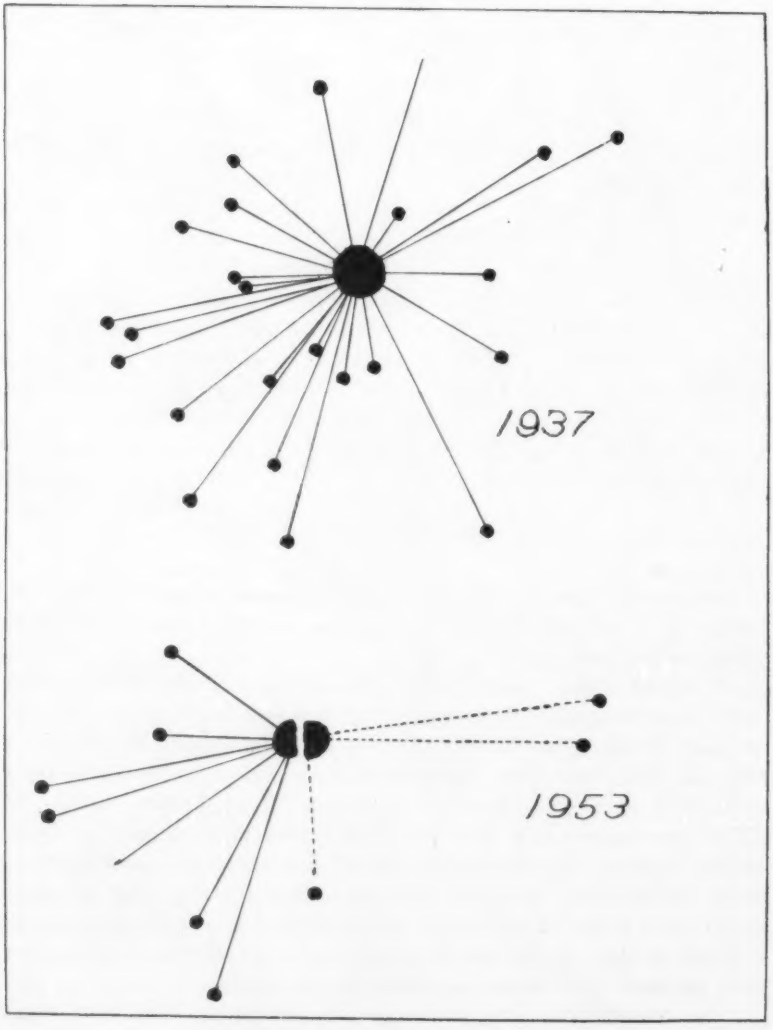

Fig. 3 Berlin Air travel

In spite of confusion and treaty restrictions the three Western allies managed to guide Free Berlin to self-government. The combined West sector is now governed by a freely elected senate. A proportional number of senate seats are still open for delegates of the East sector if, and whenever, the Soviets allow free balloting. West Berlin has also been proclaimed a "land" (state) since West Germany is a Federation of "Laender." However, Berlin's delegates to the Federal parliament (Bundestag) have only a voice and no vote. All Federal legislation requires separate legislative processing in Berlin. Thus, Free Berlin is federated with West Germany, but full integration must wait until the "Limitations of Allied Authorities" are removed. This is the often referred to difference between Berlin's *de facto* and *de jure* status. This respect of the West for treaties coupled with Berlin's present geography makes the restoration of its political functions at least temporarily impossible. That Berlin some day will again be the capital (Hauptstadt) of 67 million Germans is vouched in the new West Berlin constitution. But, while the West can offer only a promise, the East simply moved the communistic government of East Germany into its Berlin sector. In order to avoid misunderstanding, the West does not identify this government with Berlin but only with the suburb in which it resides, Pankow.

ECONOMIC STRUGGLE

Berlin's economic recovery is impressive but somewhat slower than that of West Germany. The obvious reasons are 1) a long lasting blockade, 2) the island location, and 3) the split of a prewar economic unit. Fortunately, the West as well as the East consider the area a "show-window" for their respective economic strength. Therefore, government aid in the form of loans, outright grants, priorities and preference rates lubricates progress in both camps. Posters on construction projects in West Berlin display the U.S. and the German colors announcing that the work is financed by GARIOA (Government Aid and Relief In Occupied Areas).

The problem of rubble disposal was solved in an ingenious manner. Man-made mountains of junk were simply landscaped, thus giving Berlin additional recreation areas. The new apartment houses and commercial structures are of the modern skyscraper variety which, at least, is not worse than Wilhelminian or Goering architecture. Up to 1957, 120,000 dwellings had been reconstructed in West Berlin against a total loss of 300,000.

Prewar Berlin was not only the German capital but also the country's leading trade center and largest industrial producer. Thus a large pool of skilled labor and management was available to be put to work. Already in 1945 most of these talents gave a clear vote of confidence in the West by gathering in the West sectors. This made up for the disadvantage that most prewar industrial sites were east of the new boundaries. As in the field of politics, duplication was frequently necessary. For instance, West Berlin was plunged into darkness when the Soviets staged their walkout in 1948. Machines for power production had to be airlifted. Today, a new steampower plant produces sufficient electricity, but a lack of switching facilities occasionally brings hours of paralysis to entire districts. As of 1957, close to one million West Berliners were again gainfuly employed and about 100,000 listed as unemployed. The constant flow of refugees from the East makes reduction of the latter figure very difficult. Imports into West Berlin, also proportionally declining, still exceed exports, with meats and dairy products leading the list. The precarious food situation is underlined by the fact that the people maintain victory gardens thruout the metropolitan area. Other essential imports are industrial raw materials and coal, the city's major source of energy.

Since almost all the needed goods come from West Germany, a long haul thru communistic territory represents the lifeline of this outpost of the West. Transportation is two-thirds by truck with rail and water carriers sharing the remainder.

Four industries account for the bulk of exported goods: 1) Electrical products come from the world famous plants of A.E.G., Siemens, Telefunken, Osram; 2) machines are shipped from the assembly lines of Borsig and Schwartzkopff, and machine tools from Adrema and Rotaprint; 3) optical instruments from Zeiss-Ikon and from Oskania are known everywhere; 4) chemical industries achieved world repute with the pharmaceutical products of Schering and with Europe's answer to nylon, called perlon. Others are clothing, beer (Berliner Kindel), chocolate (Sarotti) and pianos (Bechstein). It seems reasonable that the same carriers, which bring imports to the city, take the ready made goods out on the same politically precarious roads. While West Germany is West Berlin's most important customer, a U.S. instigated "Berlin Marketing Council" and an annual Industrial Fair boost the city's exports to other Europeans as well as to Latin America and to the United States.

Berlin's biggest problem that seemingly cannot be solved pend-

ing a summit conference is transportation. Logically, but also unfortunately, railroads including Berlin's interurban trains are communistically operated. This rail hub of prewar Central Europe has now only one major terminal, which of course is the "Ost- (East) bahnhof." Within the city, streetcars and buses stop at the sector boundary, while the subways go thru under special agreements. Traffic to and from Berlin is restricted to only a few gaps in the Iron Curtain which the Soviets agreed to keep open, some canals, four highways and a twenty mile wide air corridor. Since ground transportation is constantly harrassed, Berliners like Americans take to the air. Tempelhof airport, the island's gateway to the world, is getting too small for the ever increasing two way flow of Berliners and their friends (Fig. 3).

Possibly counteracting anxiety over a shoestring lifeline as the basis of everybody's livelihood is a renaissance in culture. West Berlin has again many theatres, an opera house and a central library which is an American contribution and, therefore, named the American Memorial Library. There are two schools of university rank, The Technical Institute in Charlottenburg and the Free University in the former village of Dahlem and grouped around the new Henry Ford Hall. Dahlem, also an end station in the urban transportation system, seems to be developing into the new culture center. Latest display of the Dahlem Museum is the world famous head of Nefretete.

East Berlin

Little dependable material is available on East Berlin's economic recovery. Several unpleasant lawsuits show that East Berlin products are sold in neutral countries under the same prewar tradenames which the West tries to revive. The basic issue seems to be whether the name goes with the original factory site or with the producing company. The state-owned East Berlin industries produce the same type of goods in which West Berlin excells, namely, electrical equipment, machines, and optical instruments. Leading customers are the countries of the communistic block, and also neutral nations. The quality of East Berlin's technical products is good. Textiles, especially clothing, on the other hand are definitely inferior. In addition, many items such as fuel, are still rationed. Of course there is no unemployment recorded in a socialized economy. But, actual purchasing power is reduced by rationing, complete lack of many items, and mainly by the poor quality of the articles used in daily living. Most amazing, but also

revealing, is the continued food rationing and the complete disappearance of foods, such as potatoes, from the market from time to time. This, in spite of the fact that East Berlin geographically is part of East Germany and that East Germany always has been the traditional farm area of prewar Germany.

Constructionwise, the much proclaimed showpiece of the communists is the mile long Stalin allee, a Moscow style district with 2,200 flats, all in eight to nine story apartment houses with shops, movies, and restaurants on the ground floors. The retail center, with all stores completely nationalized in the H. O. Handels (trade) Organization, is the Alexanderplatz. Nearby is the restored old city hall, now headquarters of the communistic city administration. Other communistic additions are a palatial Soviet embassy, some gymnasiums and similar mass assembly facilities.

Much disputed is the Marx-Engels Platz, a huge parade ground like Moscow's Red Square, for which the former imperial palace had to give way. A stupendous Russian War Memorial in Berlin-Treptow and the Red Army monument at the edge of the boundary line, but on Western teritory, complete the picture of mostly ruins interspersed with some life. The guards at this monument and at the prison for top war criminals, located in West Berlin-Spandau, are the only armed Russian soldiers, anywhere in the world, permitted to stand on Western soil.

East Meets West

East and West now face each other in the center of "the city" which, as the location of Hitler's last resistance, became one huge field of dead rubble. Most of it is now under Russian control with the remainder in the British sector. To every Berliner this area around the symbolic Brandenburg Gate is synonymous with the much desired political functions. Both sides talk much about reconstruction of this historic central district, but so far very little has been done. East of the Brandenburg Gate, Berlin's avenue of parades, "Unter den Linden," has been replanted with several hundred Linden trees and work is proceeding on the Gate itself. West of it, and in Free Berlin, the restoration of the Reichstag is still in the blueprint stage. Further west, the Tiergarten Park is filled again with one million young trees. Part of it, the "English Garden," is a gift of the British people. The West's most ambitious undertaking halfway close to the center is the reconstruction of the "Hansa" district. Here, grasping a unique opportunity, architects

of many countries have each designed his own version of modern living quarters, shops and churches. The entire 8,000 flat project is handled as an International Architectural Exhibit.

Standing on the main East-West thorofare, famous Potsdamer Square, even the casual observer can see why so many have defected from the East via the Berlin escape hatch. Whereas, the east side of the square is dead rubble, the west side is covered with wooden stalls and a veritable carnival of all imaginable merchandise. Anybody can buy anything in West Berlin and, in spite of an unfavorable currency exchange, East Berliners have become ingenious in smuggling.

At the root of this western superiority lies an American inspired reform of the West Germany currency, which included West Berlin. Now the international exchange rate is one West mark (D.M.) for four East marks. To avoid hardships, special provisions have been made for West Berliners who work in the East sector and vice versa. Official Exchange Bureaus in West Berlin permit unrestricted spending of East marks in Free Berlin. The East sector, on the other hand, accepts West marks only at the unrealistic rate of one to one and prohibits the import of East marks to all but the holders of communistic identification cards.

THE PEOPLE

A large share of the credit for the city's rise from the ashes goes to the people of Berlin. With 3,400,000 inhabitants in 1957—2,200,000 in the West and 1,200,000 in the East—the city is still one million short of the 1943 population figure. But almost the entire increase of 600,000 people since 1945 has been in West Berlin, whereas in the East sector, the influx of administrative personnel is equaled by the exodus of mostly young people. The free Berliner's confidence in his city's present, as well as in its future, is shown everywhere in the crowded sidewalk cafes, in stores, factories and at the ballot box.

American aid for this Mecca of freedom totals about one billion dollars. Since the money comes from sales of surplus foods in Germany, it is no direct burden on the U.S. taxpayer. These Mutual Security Funds are strictly loans with the provision that payments are to be reinvested. So far 150 million dollars have been repaid. From the economic, and from every other point of view, the American citizen could have made no sounder investment anywhere in the world.

THE NECESSITY OF AN HISTORICAL APPROACH TO CULTURAL GEOGRAPHY

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No present-day element of nature or culture can be explained without investigating the questions of origin and evolution. It would be folly to suggest that the geologist confine his attentions to the Quaternary, neglecting entirely the Tertiary and preceding periods. Or, would the anthropologist attempt to study man as exclusively a twentieth-century animal? Geographers, like other natural and social scientists, must treat all time spans with equal emphasis and respect.

The cultural geographer is primarily concerned with the landscapes fashioned by men. And these landscapes, like their physical counterparts, are constantly changing. In actual practice, the cultural geographer may study the man-made landscape at any point along the time scale. However, it is at once obvious that every landscape has undergone steady alteration up to the time chosen for investigation. For this reason, the geographer must adopt an historical approach. Otherwise, he would be at a loss to explain how and why the cultural landscape reached a certain stage of development.

American geographers often teach horrible untruths, mainly because they are at a loss to explain why something is what it is. Whereas the geologist and anthropologist have no fear in turning to the Mesozoic, Paleozoic, Proterozoic, or Archeozoic for answers to modern problems, the geographer, on the other hand, often deliberately avoids any consideration of past happenings. It is a paradox peculiar to geographers that while some have no qualms about forecasting all sorts of events and "planning" far into the future they often lack the ability to understand the present. This lack of comprehension apparently reflects a traditional fear of anything historical.

One example illustrates my point. In the central portion of the Republic of Panama the National Highway (a section of the Inter-American Highway) traverses the savanna. The flat land on either side of the road is devoted mainly to cattle grazing. The stock owners have moderate-size holdings and are economically and politically the most influential group in the savanna area. Most of the

farmers are located some distance from the highway, in the hills or bottom lands. American "experts" (geographers, sociologists, agriculturists, among others) state unequivocally that the National Highway is in the wrong place. They say it does not serve the vast number of isolated mestizo farmers; it serves only the vested interests of the cattlemen; it is where it is because of the political and economic strength of a relatively few pure whites who represent the landed aristocracy. And, it is usually added that the farmers now in the hills are there because the Spaniards seized the more accessible agricultural lands of the natives.

Nothing could be further from the truth. The edaphic and/or man-made savannas of central Panama were never farmed to any large extent by the aborigines. The Spaniards did take native land in order to establish their European cattle complex, but most pre-Columbian farming was practiced where it is today—in the hills and along river bottoms. The modern highway follows to a turn the Spanish colonial road; the Spanish colonial road was the route of the first *entradas* in the sixteenth century; the first *conquistadores* followed well-developed Indian trails from one Indian village to another.

In order to fully understand the *modern* cultural landscape of central Panama one must learn all he can about the *previous* cultural landscapes. No vested interests placed the National Highway in the savanna and it is unlikely that any engineer will ever have the opportunity to change the location. The route thru the sterile savannas has been time-tested for at least six centuries, and parts of the route were in use at the beginning of the Christian era.

In light of the above it would seem ludicrous for a geographer to suggest alteration of the one historic east-west land link in Panama. But it has been done, in the same way geographers have argued for radical changes in housing, agriculture, and an assortment of other cultural forms in Panama and other places. If the past is truly understood perhaps the geographer may make an intelligent prediction; but it should be uppermost in the minds of all cultural geographers that the seeds of the future can only be found in the fruit of the past.

Professional Papers

Professional Papers No. 16, 17, 18 and 19 are now available for sale. Write to Professor John W. Morris, Secretary of the National Council for Geographic Education.

GEOGRAPHIC BASES OF THE GADSDEN PURCHASE

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Wisconsin State College
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INTRODUCTORY CONCEPTS

The concept of environmental determinism is still being taught in our public schools. The term "geographic factor" is still being used as a synonym for physical environment. To many geographers this may seem unbelievable, but it is true.

In a geography course offered for teachers in-service, the development of a unit to be used in their classrooms is required as a term project. The objectives stated in the units have been very interesting. The objective of one teacher with a unit on Norway was to show that "Where the Norwegian lives determines what he does." The objective of two other teachers was for their pupils "To get a better understanding of how environment affects and shapes man's whole mode of living." Questions developed the fact that they truly believed that the physical environment actively molds every aspect of life. Approximately one in every five units received has shown a definite slant toward the teaching of environmentalism.

Conversely, some students have been so afraid of being classified as environmental determinists that they have avoided a consideration of the significance of environment entirely. Thus we see reflected in our public school teachers the over-emphasis placed in man's ability to control nature by some of our scholars in their revolt against environmental determinism.

A more balanced approach to a consideration of the significance of environment to man is possible. One such approach is based upon the concept that a great number of factors work together to develop man's mode of life. For simplification, most of these can be classified under a few major categories that include: 1) man's biological inheritance which gives him his physical and mental potentialities, 2) his environment (made up of both the natural and cultural phases of his world) which develops the individual's abilities within the limits of his potentialities; and, many would add, 3) divine providence.

At the present time a consideration of the relative importance of each of the above groups of factors is confusing. Altho scholars

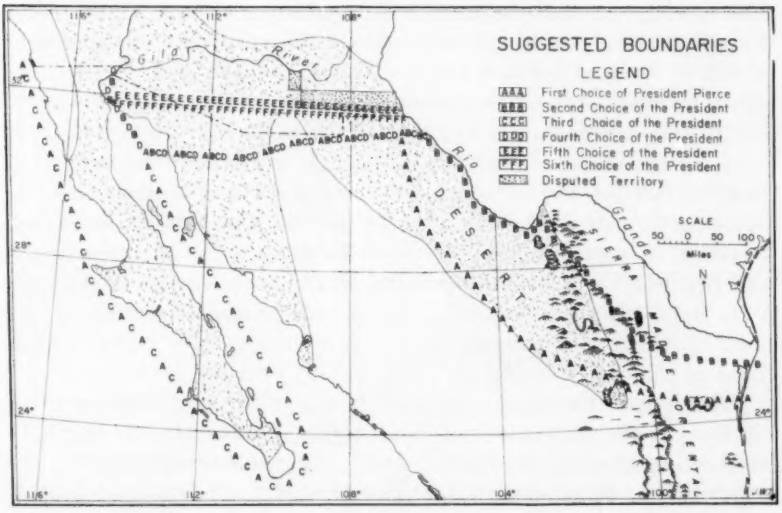

FIG. 1

have agreed upon many inherited characteristics which distinguish man's physical and mental potentials from the other animals, no definitive study has been made between the inherited potentials of the subdivisions of *homo sapiens*. The virulent disagreements in the past several decades over environmental determinism vividly portray lack of agreement on the relative significance of environments. Neither has there been developed any objective criteria for evaluating the degree to which divine providence directs, if it does so at all, the lives of individuals or peoples. Instead of arguing vociferously over which of several factors essential to man's life is most important, it seems sufficient to recognize whether or not they are essential. The next step is to try to consider as many of the essential factors as seem reasonable for a given purpose.

The greatest danger faced in trying to consider the factors which shape man's way of life is over-simplification. This is the flaw in the reasoning of the environmental determinist. He chose to consider the natural or physical environment as something distinctly separate from man and as all important in determining man's life. The same fallacy is true of those who lay great stress upon man's cultural heritage or his ability to choose and to initiate action. Culture is impossible in a vacuum. The ability to choose is valueless unless there are different things from which to choose.

The quality, abundance, and variety of items for selection are as significant as the ability to choose. Action requires something with which to act and upon which the action is to be performed. Here again the characteristics of the material used in an action help to control the action taken and the results achieved. Equally significant is the amount and type of energy available for the action. Neither can the organization (or occurrence and distribution) of these factors in time and space be omitted if a reasonable understanding of man's way of life is to be obtained. The same forces and processes which developed the other forms of life have developed man. Man moves and lives in nature and is a part of the natural world. The organization of a human culture is just as natural as the organization of an ant colony or a bee hive.[1]

This paper has been prepared in an attempt to illustrate the multiple control approach in considering human action. For this illustration a single historical event, the Gadsden Purchase, has been chosen. It is only too evident that lack of data and human limitations prevent a perfect illustration which would consider all controlling factors. Because of this, the study is limited to a consideration of "geographic factors" which appear to have helped shape the American negotiations for the purchase. Yet, it is hoped, the study presents a more balanced approach than most of the material being presented in our schools today.[2]

The Cultural Background of the Purchase

The American people of the mid-nineteenth century were a commercial people. The south with its slaves and cotton, the north

[1] For a more extensive discussion of philosophical concepts which underlie modern geography see:

a. Robert S. Platt, "Environmentalism versus Geography," *American Journal of Sociology*, Vol. LIII (1948), pp. 351-358.

b. ————, "Determinism in Geography," *Annals of the Association of American Geographers*, Vol. XXXVIII (1948), pp. 126-132.

c. Richard Hartshorne, "The Nature of Geography," *Annals of the Association of American Geographers*, Vol. XXIX (1939), pp. 171-658.

d. P. E. James, C. F. Jones, and J. K. Wright, (eds.), *American Geography: Inventory and Prospect*. Syracuse University Press, Syracuse, 1954.

[2] The author defines geography as "the study of the spatial organization of earth phenomena with an attempt to explain the development of this organization and to interpret its significance to man." Thus areal patterns or relative locations basic to the Gadsden Purchase are considered basic "geographic factors" if one insists on using this term.

with its surplus grain and industrial goods were reaching across wide spaces for trade. Railroads were being expanded rapidly. The fast sailing clipper ship, which was bringing New England prominently into world trade, had been developed. Furthermore, the idea that it was "manifest destiny" for the young nation to wrest the great western country from the Indians and the competing European powers spured the people to ever widening settlement. Desire for gold stimulated the great rush to California in the late 1840's and early 1850's. These ideas and activities were representative cultural forces of the period which affected the thinking of the negotiators.

THE MAJOR GEOGRAPHIC PATTERNS

The immediate American objectives in the negotiation of the Gadsden Treaty were conditioned by major world patterns of the time. The Americas extended in an unbroken land mass from the frozen arctic (about 73° N. Lat.) to the stormy Straits of Magellan (about 54° S. Lat.). This was a major obstacle to the trade of the more densely populated eastern states with the Pacific coast of North America and with the Orient.

The shape of the land mass was important in limiting the possible ways of overcoming this obstacle. The wide expanse of South America, with the height of the Andes, precluded adequate connections between the oceans there. The narrowing of the land mass in Central America, however, allowed connections between the Atlantic and Pacific by means of a relatively short portage. A railroad or canal was suggested to permit an easier passage of goods along this route.

The broad expanse of North America was a third factor in the shape of the continents which limited communications. The Great Plains and the Rocky Mountain Cordillera contributed an integral part in hindering transportation there. It was believed, however, that a trans-continental railroad would alleviate this hindrance. This belief proved to be of major importance in negotiating the treaty, for one of the suggested routes ran thru the area involved in the Gadsden Purchase.[3]

The broad patterns of human geography were equally important. The major concentration of population in the United States

[3] Paul Neff Garber, *The Gadsden Treaty*. University of Pennsylvania Press, Philadelphia, 1923, p. 21.

lay east of the Mississippi. The commercial people of this area had opened trade to the west by sailing around Cape Horn. The three-way trade pattern of the preceding decades, in which eastern manufactured products went to Oregon for furs which were traded in the Orient for goods to be used in the eastern United States, was fresh in the minds of Americans. The 1849 gold rush with its flood of prospectors to California enabled that area of rapidly expanding population to become a state in 1850. This boosted the demand for better communications which were desired for three reasons: 1) to facilitate defense of the new state, 2) to insure its close allegiance to the union, and 3) for trade.

The sectionalism rampant in the young country stimultated competitive efforts between the north and south, each determined to dominate the proposed railroad to the west. The route advocated by the south crossed the area considered in the Gadsden Purchase. Thus the sectional conflict, so bitter in other respects, entered treaty considerations, being especially pronounced in the Senate when that body was called upon to ratify it.

These major areal patterns of physical and cultural phenomena lay back of the immediate objectives mentioned in the bargaining for the area purchased thru the services of James Gadsden.

Conditions of Immediate Significance

The geographic conditions of immediate concern to the American negotiators can probably best be evaluated thru their six major objectives. These were:[4] 1) to settle a boundary dispute, 2) to establish a natural, defensible boundary, 3) to obtain a port on the Gulf of California, 4) to obtain the best possible railroad route from the densely populated east to the west coast, 5) to facilitate control of the Indians who were causing much international tension thru raids across the Mexican border, and 6) to expand American settlement. These objectives developed out of events which immediately preceded the negotiation of the Gadsden Treaty.

Article V of the treaty of Guadalupe Hidalgo (February 2, 1848) provided for a boundary between the United States and Mexico. This line, based upon Disturnell's "Map of the United Mexican States," was to be demarcated by a party composed of a commissioner and surveyor appointed by each of the two countries.

[4] *Ibid.*, pp. 87, 93-94. (Objectives 1-5.)

The four members of the party had equal authority in designating the line.[5]

This survey party claims our interest on three counts. First, disagreement in the party over the interpretation of the boundary delimitation led to the negotiation of the Gadsden Treaty. Second, the American surveyor in addition to his duties of demarcation was instructed to examine and survey the Gila River district to ascertain the practicability of a road, canal, or railroad thru that area.[6] And third, information reported on the nature of the country influenced the thinking of later negotiation of the purchase.

Disturnell's map placed El Paso at 32° 15′ N. Lat., ½° too far north. It also placed this section of the Rio Grande two degrees too far west. This led to difficulties. John R. Bartlett, who had been appointed the American commissioner, and Garcia Conde, the Mexican commissioner, reached a compromise. A. B. Gray, the American surveyor, would not agree, believing that the line should be run with reference to terrestrial features, as specified in the treaty, rather than latitude and longitude as agreed upon in the compromise. He was also concerned because the compromise left the Mesilla Valley, which he erroneously believed to be the best railroad route, in Mexican territory.[7] The disagreement led to the re-opening of boundary negotiations and gave the United States the opportunity to seek the objectives mentioned above.

James Gadsden was appointed to represent the United States of America. His instructions included six suggested boundary lines acceptable to President Pierce (fig. 1). The first line suggested was designed to obtain all the objectives mentioned above with the boundary following highlands and deserts, features considered to be naturally defensible. The second line was considered less desirable as it gained a smaller territory and had less desert and mountain area for defense. Lines three and four sacrificed what the president considered the natural boundary as well as territory; lines five and six provided only for what was considered a suitable railroad route.[8] As the Mexican government would not consider

[5] *Treaties and Conventions Concluded Between the United States of America and Other Powers Since July 4, 1776.* Government Printing Office, Washington, 1889. pp. 681-693.

[6] Garber, *op. cit.*, pp. 21, 70-74.

[7] Sen. Ex. Doc. No. 41 (665 pp. 2-4), 32 Cong. 2 sess.

[8] Garber, *op. cit.*, pp. 91 ff. (Based on memorandum of oral instructions to be delivered by C. L. Ward, Department of State, Special Missions, No. 3.)

giving up the great area indicated in the first choices of the Americans, some of their objectives were necessarily abandoned. These included the desire for a natural boundary and much territory. The port on the Gulf of California was sacrified to the niggardliness of Congress which ratified only after the purchase price had been reduced from $15,000,000 to $10,000,000. This reduced the size of the purchase, giving up an area which included the port, the fertile delta area, and the mouth of the Colorado River.

A suitable railroad route was the dominant objective of the Americans. This was illustrated by its being the only one included in all the proposals for a new boundary and the only one which Congress supported financially. It was emphasized by the appointment of a former railroad executive to negotiate the treaty. The acquisition of the relatively low route south of the Pinal Llano Mountains,[9] which were an obstacle on the formerly suggested Gila Valley route, fulfilled this goal.

Several geographic conditions were significant to the consideration of this southern route. Competing routes and their comparative feasibility could occupy much space but are beyond the scope of this paper. To call attention to the more northerly routes, advocated by the northern states, and the isthmian routes, advocated primarily by private interests, must suffice.

The terrain of southern Arizona and New Mexico gave a suitable gradient for a railroad with a minimum of difficulties. The surface material was also adequate for making a road bed and did not have the disadvantage of freezing and thawing found farther north. Neither was the route handicapped by deep snows. Sparce vegetation, however, indicated a possible water supply problem which was emphasized by the coarse stream pattern and the character of the streams.

The scarcity of construction timber posed another problem. But this problem could be alleviated by planning the route to connect with the east by passing thru the Cross Timbers area of Texas where wood was available.

A problem in human geography was indicated by Article XI of the treaty of Guadalupe Hidalgo. This article provided for the the United States to protect Mexico from Indian raids as it would its own citizens. Relatively large concentrations of militant tribes

[9] Used then to refer to the mountains southwest of the Colorado Plateau. Now specifically, the Pinaleno and Galliuro Mountains are the obstacle.

were located just north of the Mexican border. These tribes frequently raided the Mexican settlements which lay south of their area. The Comanche and Apache tribes were especially active in these raids. Notes of protest and demands for reparations flowed from Mexico.

It was hoped that the problem raised by the location, character, and distribution of this Indian population would be solved by white Americans developing a settled zone along the proposed railroad. This zone was to serve as a buffer between the Indian tribes and the Mexican border, thus relieving the federal government of the heavy burden of maintaining a strong military patrol in attempting to restrict the raids.[10]

The development of a settled zone was contemplated in light of the suitability of the area for occidental occupance. While existing knowledge was meager, a few facts were known and considered. The area was too dry for agriculture as practiced in the humid east. It was believed, however, that the rivers offered hope for irrigated farming. The Spanish missions and Pueblo Indians had demonstrated that this could be accomplished. They had also shown that the soils were productive once water was available for plant life. Even tho much of the area was too rough and high for irrigation, open river valleys were available and offered likely sites. The grasslands, altho used for grazing today, were considered of little value. The areas of desert shrub were considered valueless.[11]

SUMMARY

Some of the factors considered in negotiating the Gadsden Treaty have been examined in the light of the motivating ideas of the American people at that time. From this examination it is seen that a number of geographic phenomena swayed the American negotiators of the Gadsden Purchase. Among these were: 1) the major world patterns of land and water distribution, 2) the relief and shape of the Americas, 3) the character and distribution of population, 4) the uneven distribution of resources, and 5) the world net of communication routes.

Factors more immediately in the minds of the negotiators were the distributions of: 1) landforms, 2) climate, 3) water supply, 4)

[10] Garber, *op. cit.*, p. 21. No single company operates the railroad visualized by the early planners, but the Southern Pacific took over the Western claims of the Texas and Pacific and completed the road in 1882.

[11] Sen. Ex. Doc. No. 108 (832 pp. 49-50) 34 Cong. 1 sess.

soils, 5) vegetative cover, and 6) native and white population. The effect of sectionalism or the sectional distribution of ideas was also apparent. These conditions were basic to the six objectives sought by the Americans, chief of which was a suitable route to connect the densely populated east with the Pacific coastal area.

Thus the spatial distribution of both physical and human factors served as significant controls of the Gadsden Purchase.

USING MAPS IN THE SECOND GRADE[1]

ROSE SABAROFF
Oregon State College

A map is a shorthand record of a mass of geographic knowledge which would require many pages or even a volume to record in words. Almost anything concerning an area may be shown on a map such as, the form, the size, the location, direction, topography, transportation lines, vegetation, animal life, industries, density of population, etc. As long as man was a localized creature, he was able to look over this array in his locality and keep his concepts straight. The citizen today, however, is part of a living unit far too big to see. Hence, without proper understanding and use of the map there is no way to build an orderly or complete concept of one's state or nation. Neither an adult or child can gain a full knowledge of the world by exploring it bit and bit and piecing together in his mind his own concrete experiences. Words and pictures will help to complete and enrich his experiences.

"But only maps will enable him to understand the relation of one place to another and the significance of the location of places. The *purpose of a map* is to reduce the patterns of the physical and human features on the earth to a size that can be seen at one place."[2]

Maps also encourage relational thinking. When one studies the data found on two or more maps of the same area, or when he studies two or more types of information found on the same map, it becomes obvious that they are related. However, the extent to

[1] This is the third of a series of articles. The first two in previous issues (September and October, 1958) dealt with firsthand experiences in geography and map-making at the same grade level.

[2] Katheryne T. Whittemore, "Maps," *Geographic Approaches to Social Education*, Nineteenth Yearbook, National Council for the Social Studies. Washington, 1948, 118.

which maps will be utilized as instruments of learning will depend on how thoroly the techniques of using maps have been mastered and whether maps are recognized by the pupil as active educational tools. Furthermore,

"People do not study maps to understand maps. They study maps to understand the earth and its inhibitants. A map symbol does not stand for a word. The student has not learned the meaning of a symbol when he has learned to name it. Every map symbol stands for something real (though not necessarily visible) on the earth. A student has truly learned the meaning of a map symbol only when he understands the real thing it stands for. With every new map symbol . . ., the student gets a new understanding of the earth and man."[3]

Basic to any understanding of maps is the ability to translate maps into landscape imagery. This ability is developed by observation and study of the landscape of the immediate environment in the primary grades. As a child develops the symbols for mapping what he himself has seen, he becomes increasingly able to translate these symbols from a map drawn by others back into the landscape images he has built from previous directed observation. Mapping abilities and map interpretation skills follow bit by bit as meanings for symbols to be used *slowly develop*. Hence, even with a program of observation and creative mapping, pupils still need to be provided with a developmental sequence in learning to read and interpret maps made by others.

LET'S START WITH AERIAL PHOTOGRAPHS

"Airplane views are the easiest of maps because they are only extensions of variations of the familiar instead of being expressed in difficult symbols. If the water in an airplane rotogravure is painted blue to bring it out more clearly, an airplane view becomes a transition map from a play-scheme map [a rough map sketch drawn on the floor on which children can act out or play out relationships] to a symbolic outline map where the representative quality of the symbol is practically lost."[4]

The aerial photograph is useful, then, as a step from three-dimensional to more abstract symbolization. It is useful, also, as an aid in visualizing more abstract symbols on a map. In addition, it does something that even a trip might not do. It provides an overall perspective of the area traversed, and it shows it all at one time. It cannot be assumed, however, that children will understand even an aerial photograph at first view. It is well if they can view the neighborhood from a hill or tower and recognize the similarity

[3] Mamie L. Anderzhon, *Steps in Map Reading: A Map-Reading Workbook*, Rand McNally and Co., New York, Chicago, San Francisco, 1955, iv.

[4] Lucy Sprague Mitchell, *Young Geographers*, John Day Co., New York, 1934, 45.

with that which an aerial photograph portrays. As with all experiences, the teacher must have clearly in mind the purpose for which the aerial photograph is being used. Without guidance as to what the children should study it for, important relationships may well be overlooked. A teacher should not say, "Study the photograph," but specify, "Look carefully and see what kind of a coastline you see. Where is it mountainous, and where might ships come in?" or "Look to see where the railroads are. Why do you think they were built there?"

Pictorial and Semi-Pictorial Maps

Pictorial maps use the simplest symbols. They are drawings or photographs of real objects. They must be accurately placed, and *not too cluttered.* The base map should be accurate and in proper scale.[5]

All of the play-scheme maps that are made and used with three dimensional objects can eventually become pictorial maps by replacing the objects with pictures. Pictures can be removable, or added gradually, so the pupils are able to handle without confusion the concepts represented. But pictorial maps, too, can become too cluttered. If the teacher remembers that maps at this age level are to be used for a single purpose, there is usually no need for clutter. However, if the relationships to be developed do require many symbols, these relationships might wait until some of the picture symbols can be replaced by conventional symbols which use less space.

Pictorial maps can be works of art as well as accurate. If any such maps of the neighborhood are available, they certainly should be obtained.

Teacher-Made Maps

Teacher-made maps can be adjusted to the children's level of development in map skills. The teacher's map will be accurate as to scale. It will contain the area that the children have studied on trips, in aerial views, and in photographs. She will use the symbols the children are familiar with, but they will be accurately placed (within the limit imposed by their size). The teacher should make several enlargements of the neighborhood area taken from the city or county map. (She can do this by projecting a city or county map

[5] Clyde F. Kohn, "Interpreting Maps and Globes," *Skills in Social Studies,* Twenty-Fourth Yearbook, National Council for the Social Studies. Washington, 1953, 169.

with an opaque projector and tracing off just the neighborhood area.) Having several base-map copies, she can then add the particular features needed for a given lesson. She may first use the map on the floor or table as a play-scheme map. She may then substitute pictorial and semi-pictorial symbols, always with agreement from the class as to what they represent in reality. Eventually, even at second grade level, having gone thru the previous steps, she can use conventional symbols, but only for those features seen and discussed by the class.

The teacher will want to make maps of the same area in different scales so that the children begin to recognize features and relationships regardless of size. The smallest map of the neighborhood should be at the scale suggested by Kohn, 12″ to a mile. This might be the size of the map she gives to the children to use individually at their seats. These might be the maps the children take on trips as a guide, or to which they add new features.

USING COMMERCIALLY-MADE STREET OR ROAD MAPS

The teacher can probably get from a service station a road map of the city or county. She should analyze the maps of different oil companies and choose the simplest, and the one most suited to the purpose. The children should learn to locate their neighborhood on the city or county map. They should also locate their school, their homes, other familiar features. They might trace out extensions of familiar streets. The children might be helped to make some very simple comparisons between their neighborhood and others. For example, the teacher might want them to discover how their neighborhood, which may be totally residential (except for a shopping area), is located in relation to the commercial area, a large water body, an important highway or railroad or coastline. Or if their neighborhood is a rural one, she might want the children to see where they are in relation to the county seat, transportation ties, etc.

The teacher might also be able to get a precinct map she can use similarly. Maps thus used should always be oriented properly in terms of outdoor space even tho second-graders will usually not have been taught cardinal directions as yet. Maps at this grade level should be read looking down on them—on floor or table—not hung.

Summary of Reading and Interpreting Maps Made By Others

The reading and interpretation of maps at second grade level will be confined to maps of the neighborhood or parts thereof, except as the neighborhood is related to the larger community for specific purposes. However, the skills and concepts learned now will have much broader use for interpreting landscapes later on that are not available for firsthand observation.

The children will use maps made by others much as they used their own earlier maps: 1) to observe relative size or extent of any feature or area; 2) to observe relative location of features of concern in a given lesson; 3) to locate features previously observed; 4) to study relative distance between features; 5) as a guide in planning a trip; 6) as a guide *on* a trip; 7) to make inferences that have been developed or made possible in previous work; 8) to recognize certain physical features and their relation to certain culture features that are within their understanding when they are properly guided.

Maps should be used as often as possible, and the teacher should always check that maps are properly oriented in space and that the children are not developing misconceptions.

"One learns to read only by reading. At any given level of learning, abundant practice must be provided in reading . . . within one's comprehension at that level."[6]

Parker was talking about reading stories in the above quotation. But she points out that it is equally applicable to reading maps.

Using the Globe

Modern geographers agree that a simple globe, for informal use should be present in all primary grades.

"Throughout the primary school, children should come into contact with the globe. Very early his attention should be called to the shape of the earth as well as shapes of continents.[7]

The first globe displayed probably should show nothing more than land, water, the poles, the equator; and these four representations should be explained to the child."[8]

". . . the children will become familiar with the water bodies and the land masses. Their questions should be answered."[9]

[6] Edith Putnam Parker, *Seeing Our World Through Maps,* Weber Costello Co., Chicago Heights, Illinois, 1942, 6.

[7] Kohn, *op. cit.,* 174.

[8] Gertrude Whipple and Preston E. James, "Instructing Pupils in Map Reading," *Social Education,* 7 (May, 1947), 206.

Barton conducted an experiment with primary children in the use of a globe and he concluded:

"To place globes of several sizes and types in a primary room will help establish the understanding that they are representations of the earth and things found on the earth. When globes are made available, many children soon learn to name and identify continents and oceans."[10]

IN CONCLUSION

Children must be helped in the early grades to observe and analyze the immediate world around them. As they become able, they map and interpret from maps this same evironment. The images they have thus developed to replace the symbols on maps become the basis for comparing distant places to those with which they are familiar.

"The real landscape is the geographer's laboratory. . . . The child begins with the landscape where he lives. . . . The work of people, landscape features, and climatic variations reported and observed in other places take on meaning as the child gains insight into the work of the people, landscape features, and climate of his own community."[11]

But we do not stop with observation. Children are helped to go on to drawing maps of their own, and from there to a program of developing map-interpretation skills that moves from three-dimensional representations to increasingly abstract symbolization. Only when children have had many opportunities for such experiences will maps become for them a source of pleasure and an outstanding tool for becoming better acquainted with the world and the work of the world in which we live.

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[9] Thomas F. Barton, "Geographic Instruction in the Primary Grades," *Geographic Approaches to Social Education,* Nineteenth Yearbook, National Council for the Social Studies, Washington, 1948, 215.

[10] Barton, *ibid.*

[11] Mamie L. Anderzhon, "Illustrations of Learning Experiences Which Lead to the Development of a Geographic Point of View," *Geographic Approaches to Social Education,* Nineteenth Yearbook, National Council for the Social Studies, Washington, 1948, 232-33.

Reservations for November Meeting

Have you made your hotel reservations for N.C.G.E. November meeting in New York City? The management of the Hotel Statler Hilton has agreed to the following special rates for those attending the New York City meeting: singles are $8.00; doubles, $6.00 per person; and twins, $7.50 per person. When you write for reservations, please mention N.C.G.E. or these special rates will not be granted. Send reservations to: Mr. George Maher, Front Office Manager, Hotel Statler Hilton, New York 1, New York.

TWO DIMENSIONAL GRAPH ENLARGEMENT

DAVID L. ZUFELT
State University Teachers College, Geneseo, New York

THE PROBLEM

The understanding of concepts implied on a rainfall map requires more than the interpretation of the symbols. Since basic geographic concepts are involved, the problem arises as to ways to bridge the look of the map to an understanding of what it tells. The textbook map that shows average annual rainfall poses just such a problem.

At best children can understand that there is a great difference between five and 80 inches of rainfall. Pictures of vegetation and ways that people live in places having those amounts of precipitation help them to gain an appreciation of some of the differences resulting amounts of rainfall. But to refine the meanings to be found on the over-all information mapped, the device of a two dimensional graph enlargement was developed.

MATERIALS USED

The following items are needed: three feet square piece of cardboard, tempra paint and brushes, several one-half and one inch nails with both small and large heads, several pieces of wood rectangular in shape of one-half to one inch in diameter and from one to 12 inches in length, yard stick, an art gum eraser, ruler, soft lead pencils, scissors or a cutting edge, large thumb tacks, hammer, and a small saw.

PROCEDURE FOR CONSTRUCTION

1) Select the country, state, or geographical section which you desire to enlarge, and trace the outline of the selected area as well as the divisions of rainfall.
2) If the tracing of the original pattern is less than $5'' \times 5''$ use a one-fourth inch grid, if the tracing is $8'' \times 11''$ use a one-half inch grid. Draw the grid over the tracing which will be used to make the enlargement upon the cardboard.
3) The grid on the cardboard should be appropriate to the size of the pattern. The size of the pattern is a variable which must be taken into account. For example if the grid on the pattern is one-fourth inch use a one inch grid on the card-

board; if the grid pattern is one-half inch use a two inch grid on the cardboard.

4) With scissors or a cutting edge, cut out the enlargement as well as the divisions of rainfall. After selecting the colors to represent the various measurements of rainfall, paint each division accordingly.
5) With a scale of one inch of wood equalling ten inches of rainfall, saw the proper length of wood needed for each rainfall division.
6) After the paint has dried, attach each painted division to the corresponding length of wood with a short nail. Then attach a two inch square piece of cardboard to the opposite end of the length of wood. The two-inch square piece of cardboard acts as a support for the rainfall division, thru which the thumb tacks are inserted, fastening it to the bulletin board.
7) Place each rainfall division in its proper position, as if you were assembling a puzzle, attach on the bulletin board with large thumb tacks. Thus the rainfall bars will be at right angles to the bulletin board.
8) Make sure that the enlarged sections are placed close together to give continuity to the enlargement. Then place the appropriate key or legend and the corresponding rainfall scale on the bulletin board.

CLASSROOM USE OF DEVICE

The two dimensional graph enlargement was used to introduce a unit on Africa. It was used as a bulletin board display with the addition of pictures of vegetation and agriculture of the various rainfall divisions. During the course of study it served as a ready reference.

The device can be adapted to other forms of maps such as a relief or population density. The emphasizing of such variations has helped the children to better associate geographic placement and the topic involved. The students were eager to construct the device themselves to aid them in their study of other areas of the world.

CONCLUSION

Benefits derived from the use of this device are manyfold. The children were helped to feel the differences between regions of varying rainfall, as well as an appreciation of the blend of change

along the boundaries between the divisions of different rainfall. It whetted an interest to find out the cause of such rainfall variation in Africa and its effect upon the lives of the inhabitants. Finally the children derived a more realistic appreciation for the effect that rainfall has upon the lives of people all over the world.

THE USE OF THE "PROJECT METHOD" IN GEOGRAPHY

HARRIS M. TAYLOR
Taft Junior High School, Washington, D.C.

The need and demand for more and more geographical knowledge and understanding is an absolute must in our dynamic world. In 1954 the Junior High Schools of Washington, D. C. initiated a one year continuous program of United States Geography based on the following units:

1. Familiar Conditions Due to the Earth's Relationship to the Sun
2. Information From Maps
3. Natural Surface Regions of the United States
4. Kinds of Climate in Our Country
5. Major Resources, Products, and Commodities of the United States
6. Trade and Transportation in the United States and Among the Nations

Methods must keep abreast of the changing role of geography. A most promising method is the "Project Method" which has been used for years with good results by teachers of science. This method can be used to supplement and vitalize regular classroom instruction in geography.

The purpose of this method is to accomplish the following: 1) encourage individual initative, 2) allow for individual expression, 3) encourage creativeness, 4) afford an opportunity to practice library investigation, 5) allow pupil to pursue his own special interest, 6) provide tangible results which the pupil and parents can easily recognize, and 7) provide maximum amount of pupil participation and planning.

Organization

The pupils are allowed three months to select and complete their projects. They are allowed wide latitude in the selection of projects, but they must submit reports on 2 × 5 cards once a week. These

progress reports are submitted to the teacher, and describe the pupil's progress and problems. The teacher makes appropriate comments and suggestions. Timely projects are presented to the class by students working on the particular project.

The projects are divided into two parts, one part is the model and the second part is the research on the project. This not only affords practice in the construction of the model, but provides an opportunity for the pupil to do research on his special area of interest. Such projects as model coal mines, oil fields, farm conservation projects, solar system, factories and a host of other projects in the various fields of geography have been exhibited. At the end of 12 weeks a "Geography Exhibition" is held in the classroom.

PREPARATION

As no group activity can be sucessful without adequate preparation and planning, the following steps were taken:

1. The following pupil committees were selected for display of projects.
   a. Invitation committee—This committee prepared the invitations for school officials, guests and judges. This activity which was coordinated with the English Department provided the pupil with an opportunity to practice correct form in letter writing.
   b. Display committee—This committee provided the pupil with an opportunity to practice the art of display and decoration. This activity was coordinated with the school's art department.
   c. Music committee—This committee selected appropriate music for background and atmosphere during the Geography Exhibition.
   d. Welcoming committee—This committee welcomed and guided the guests who visited the Exhibition. This provided an opportunity to practice social graces.
   e. Publicity committee—This committee wrote articles to the school newspaper, made posters and took pictures of the various projects.
2. The class as a whole selected the judges from the school's social studies teachers and decided upon the judging criteria. The preliminary judging was done by members of the student's own class. The best three exhibits from each class went into the final competition for the selection of the best three from all classes. Certificates were awarded.

RESULTS—EVALUATION

In using this method two problems were encountered: 1) the need for agreement on the maximum size of the project—this was necessary because of limited classroom space. 2) a limitation of the amount of money spent on the projects.

Altho the quality of the projects generally increased with the intelligence level of the class, superior projects were found in each

group which participated. The causative factors could not be readily ascertained. The method does, however, lend itself to use with both average and gifted students.

Two disadvantages of the method were: 1) the necessity of discouraging pupils from accepting help from parents in making projects, and 2) the realization that many students are not artistically inclined.

As a follow-up over a two year period pupil reactions were obtained by use of a questionnaire submitted to 140 pupils with an IQ range of 98-136. The results are shown in Table 1 (Results are reported in per cents).

TABLE 1

	Yes	No	No Opinion
1. Pupils indicating that they enjoyed making projects	64.7	21.5	13.6
2. Pupils indicating projects increased their interest in Geography	59.7	24.4	15.8
3. Pupils indicating projects increased their appreciation of Geography	51.7	19.4	28.7
4. Pupils indicating projects increased their knowledge of Geography	69.0	16.5	14.3
5. Pupils desiring to make more projects in Geography	28.0	45.3	28.8
6. Pupils indicating that teacher gave enough help, explanation and guidance in making projects	64.7	17.9	17.9
7. Pupils receiving help from parents	37.4	58.9	.03

THE NATIONAL COUNCIL AT WORK

NEW YORK CITY MEETING

The preliminary program of the Forty-fourth Annual Meeting appears in the September issue of the Journal of Geography. Participants whose names did not appear in the September issue are: Lester E. Klimm, University of Pennsylvania, Philadelphia, Pennsylvania, Robert B. Monier, Plymouth Teachers College, Plymouth, New Hampshire, Edward G. Pleva, University of Western Ontario in London, Ontario, Canada, George T. Renner, Arizona State College, Tempe, Arizona, and Warren H. Burton, State Teachers College, Cheyney, Pennsylvania.

Members of the Local Arrangements Committee whose names did not appear in the October issue of the Journal are: Publicity Committee—Jack W. Entin, Forest Hills High School, New York City, New York and Frances Hennessey, Fort Hamilton High School, Brooklyn, New York and Hospitality Committee—Edith M. Cowin, Rutherford, New York.

All persons interested in geographic education are invited to attend and participate in the Forty-fourth Annual Meeting.

Place: Hotel Statler Hilton, New York City, New York.

Time: November 28-29, 1958.

Mary Viola Phillips, *President*

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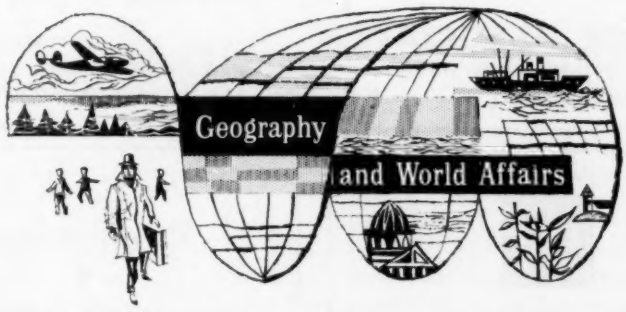

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INDEX to the JOURNAL OF GEOGRAPHY

Type is now being set on the INDEX to the JOURNAL OF GEOGRAPHY (1922-1956). This INDEX will make a book of approximately 270 pages. It is proposed that the hard back copies of this publication sell for $5.00 each and that paper back copies be sold to non-members for $4.00 each. Members of the organization can purchase the INDEX for $3.00 per copy, or at only a little above the cost of publication.

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REVIEWS

Otis W. Freeman and John W. Morris, **World Geography.** McGraw-Hill Book Company, Inc., New York, 1958. 623 pages with index, atlas and bibliography. $10.75.

George F. Deasy, Phyllis R. Griess, E. Willard Miller, and Earl C. Case **The World's Nation: An Economic and Regional Geography,** J. B. Lippencott Company, New York, 1958. 962 pages, with maps and illustrations. $8.00.

The two books listed above are now available for teachers looking for a text for college and university courses in World Geography. Both books are designed for use in schools requiring courses covering two semesters, three quarters, or, in other words, a year's work. The books are planned to give the student a better understanding of the political, economic and regional problems facing the countries of the world, a world so drastically changed during the present century as the result of two major wars, several minor ones, revolutions, counter revolutions and the consequent political realignment of nations and their boundaries.

The book *World Geography,* edited by Freeman and Morris and written by 16 authors, all specialists on specific regions, proceeds after an introductory chapter and an atlas section to a consideration of political areas of the Western Hemisphere to selected regions in the Eastern Hemisphere.

Part one, the Western Hemisphere, treats in the following order, the United States, Canada, Middle America and South America. Three chapters are devoted to the United Stats, one, a general survey, one on Eastern United States and one on Western United States.

Part two, the Eastern Hemisphere, is divided into such areas, which, for various reasons, assume special significance in world affairs today.

At the close of each chapter there are included special thought-provoking exercises and selected references. Pictures, maps, graphs and charts are freely used and are well placed in the text for use by the student. A "Study Guide" has been prepared.

The second book, *The World's Nations: An Economic and Regional Geography* written by Deasy, Griess, Miller, and Case is an economic geography which employs political divisions as the basic regional unit. In the Foreword they state their reasons for choosing the political divisions.

Following the Foreword one finds listed 911 maps and 912 illustrations which are used in the text and an introductory chapter. This is a formidable and comprehensive list. Few references are included for reasons stated in the Foreword.

The authors also begin their study with regions close by and proceed to the more remote areas. Seven major land divisions are included namely: Anglo-America, Europe, Latin America, The Soviet Union, Asia, Southern Asia, Southeastern Asia, Africa, Australia, and the Pacific Islands. Each major land division is sub-divided into several political units and then in turn into economic areas.

Many new and well selected maps enhance the teaching value of the text as well as the bold faced type which sets off each paragraph.

Both of these books are timely and will fill a need for courses in World Geography. Teachers everywhere will welcome them. The reviewer recommends that both books be examined in some detail by teachers seeking a textbook in courses for World Geography.

INA CULLOM ROBERTSON

State Teachers College
Valley City, North Dakota

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